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Customer Documentation

VGA Utility and Drivers User's Manual

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VGA Utility and Drivers

User's Manual

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Table of Contents

VGA Utility

CLMODE VGA Utility 2

- Using CLMODE's Menu-driven Interface 2
- Choosing the Attached Monitor Type 2
- Available Video Modes 4
- Retrieving the Current VGA Controller Status 4
- Getting Help 4
- Exiting CLMODE 4
- Using CLMODE's Command Line Options 5

SetRES 7

- Installing SetRES 7
- Before You Begin 9

Display Drivers

Microsoft Windows 11

Autodesk - ADI 4.2 14

- Quick Start Guide 16
- Installation 17
- Configuring AutoCAD 12 17
- Configuring AutoCAD 11/386 18
- Configuring TurboDLDClassic 18
  - Basic Configuration Menu 20
  - User Interface Menu 20

Expert Configuration Menu 22
Reconfiguring TurboDLDClassic 24
AutoCAD Release 12 24
AutoCAD Release 11 24
Configuring an AutoCAD 11 Environment 25
Configuring AutoShade 26
Configuring 3D Studio 26
Configuring AVE Render 29
Changing Colors 31
TurboDLDClassic Commands 34
Memory Usage and Lists 39
Tips and Tricks 40
Upgrading From Older Panacea DLD drivers 40
Maneuvering Through AutoCAD 41
Command Summary 43
GEM/3 46
Lotus 123 v2.x, Symphony, and Report Writer 48
Lotus 123 v3.X 50
Ventura Publisher 52
Microsoft Word 53
WordPerfect 5.1 54
WordStar 56

Utility Software

Serveral utility programs are supplied with the VGA. The following section describes these utilities and how to use them.

CLMODE is a program supplied with the VGA to configure its various options.

Install CLMODE into your system. Use the install program to copy the VGA utility programs contained in the VGA diskette into your system.

SetRES lets the user change the operating resolution and the number of colors from within Windows.

CLMODE VGA Utility

The CLMODE utility allows users to define the type of monitor attached to the system, and set the video modes supported by the Cirrus Logic VGA.

Using CLMODE's Menu-driven Interface

At the DOS prompt type:

```
CLMODE      <Enter>
```

The main popup window consists of a number of buttons. Each button represents a different option or menu. The underlined letter of a button name specifies the hot key combination for that item. For example, press the Alt and the underlined letter keys simultaneously or just the underlined letter key to select an option.

NOTE: *If you intend to use a mouse with CLMODE, install a mouse driver prior to running the CLMODE utility.*

Choosing the Attached Monitor Type

Select the proper monitor type to allow the Cirrus Logic VGA to display the highest quality output that it is capable of with the attached monitor. The monitor type determines what video modes are available to your system. It also determines the vertical refresh rates available. Generally, the higher the refresh, the better the screen looks. Do the following to choose the attached monitor type:

1. Select the `Monitor Type` button. The `Monitor Type Setup` window is displayed. The current monitor type will be highlighted initially.

2. Use the cursor keys or the mouse to choose the type of monitor attached.

3. When all of the settings are correct, select the `OK` button.

If there are any problems or you change your mind, select the Cancel button.

4. Before saving the new monitor type, select the Verify button to view each of the new video timings selected to verify their compatibility with your monitor.

5. After each test screen is displayed, press Enter or the left mouse button to see the next video mode. If there is a problem, press Esc or the right mouse button to return you to the Monitor Type Setup dialog box. Try a slower setting for the resolution that did not work and try verifying your choices again.

6. Once you are sure that everything is correct, press the Save button to set the new monitor type.

   Press the Cancel button to discard any changes.

   Press the Help button to get a detailed explanation on the monitor types and the VGA refresh rates.

On some systems, the monitor type will be remembered from one session to the next. To test this, do the following:

1. Select a monitor type and exit the CLMODE program.

2. Turn the computer off for ten seconds.

3. Reboot the computer, run CLMODE, and verify whether or not the monitor that you selected is still enabled. If it is, it should not ever need to be set again in normal use.

   If the monitor type was not kept then you should select the option to have CLMODE save the monitor type in you AUTOEXEC.BAT file. You will be given this choice after selecting the Save button.

Available Video Modes

1. Select the `Video Mode` button. The `Video Mode Preview` window displays all the modes supported according to the monitor type attached and the amount of video memory present. This list of video modes tells you which are available in your current configuration for use with extended resolution drivers.

2. Select the `Preview` button to see what the different video modes look like on your monitor

3. After each test screen is displayed, press Enter or the left mouse button to see the next video mode. If you don't want to see any more video modes, press Esc or the right mouse button to return to the `Video Modes Preview` window.

Retrieving the Current VGA Controller Status

The information in the main window displays the VGA controller type, the BIOS version number and the amount of video memory present.

Getting Help

CLMODE provides Help for the following items: Monitor Type, Video Mode Preview, Mouse, Keyboard and About CLMODE. The Monitor Type help window explains the different capabilities of each monitor type. The Video Mode help window defines the information given in the Video Mode window. The Keyboard and Mouse help windows explain how to use the keyboard and the mouse to make selections. The About . . . window displays the Cirrus Logic copyright message and the CLMODE version number.

Exiting CLMODE

To exit CLMODE at any time, press `Alt` and `F4` keys simultaneously, or click the left mouse button on the system button of the main window (i.e. The top left corner button of the window which is shown as a dot), or select the `Exit` button. When the CLMODE utility exits, the current video mode, monitor type, and VGA refresh rate is displayed.

Using CLMODE's Command Line Options

The menu-driven windows are not displayed when command line options for CLMODE.EXE are given at the DOS prompt. Instead, monitor type, video mode and refresh rate are set at the DOS prompt. The command line options for CLMODE.EXE are:

```
CLMODE [[modenum][+*-]] [m[montype] | t6=x t8=x t1=x t2=x]
[modenum]  mode number
[+*-]      + selects 400 lines (default)
             * selects 350 lines
             - selects 200 lines
[montype]  monitor type
t6=x(Hz)   640x480   @ (0 = 60, 1 = 72)
t8=x(Hz)   800x600   @ (0 = 56, 1 = 60, 2 = 72)
t1=x(Hz)   1024x768  @ (0 = 87i, 1 = 60, 2 = 70, 3 = 72)
t2=x(Hz)   1280x1024 @ (0 = 87i, 1 = Not available)
```

For example, to select mode 3 for a Super VGA monitor (montype 2), type the following command at the DOS prompt:

```
CLMODE 3+ m2[Enter]
```

To select custom monitor timings with 640x480 at 60Hz and 800x600 at 72Hz refresh type:

```
CLMODE t6=0 t8=2[Enter]
```

Type an invalid option to display the command line help text. Type s as a command line option to display the current CLMODE settings.

Table 1 lists the common monitor types.

Table 1 Common Monitor Types

Monitor Type	Examples	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Display Resolutions
0	AcerView 11	31.5	60	640x480
1	IBM 8514, 8515	31.5	60	640x480
		35.5	87 [i]	1024x768
2	NEC 2A	31.5	60	640x480
		35.2	56	800x600
3	AcerView 11D, 33D	31.5	60	640x480
	NEC II	35.2	56	800x600
		35.5	87 [i]	1024x768
4	NEC 3D	31.5	60	640x480
		37.8	60	800x600
		37.8	87 [i]	1024x768
5	AcerView 34T	31.5	60	640x480
	NEC 3FGx	48.0	72	800x600
		48.0	60	1024x768
		48.0	87 [i]	1280x1024
6	NEC 4D, 4FG	31.5	60	640x480
		48.0	72	800x600
		56.0	70	1024x768
		48.0	87 [i]	1280x1024
7	AcerView 25	31.5	60	640x480
	AcerView 56L, 76i	48.0	72	800x600
	AcerView 78i, 98	58.3	72	1024x768
	NEC 5D, 5FG, 6FG	48.0	87 [i]	1280x1024

[i] = Interleave mode

SetRES

SetRES is a utility that runs under Windows 3.1. It allows users to change the screen resolution, number of screen colors, and select either large or normal fonts and system resources.

After selecting new options, users can either immediately restart Windows, and the new resolution will take effect immediately, or continue working in the current resolution, in which case the new resolution will take effect the next time Windows is started.

NOTE: *This application assumes that the Windows drivers have been correctly configured using Windows Setup. For information on installing and configuring Windows display drivers using setup, see the Microsoft Windows section in this manual.*

From Windows Setup select the `Cirrus 54XX` any resolution entry to correctly configure the driver for Windows 386 enhanced mode operation, and copy the necessary font files to your hard disk.

Installing SetRES

1. Start Windows.

2. In the Program Manager, choose `File Run`.

3. Specify the diskette drive where the Windows Drivers and Utilities Diskette is inserted, and run the install program. For example, if the floppy is in drive A:, type:

   `A:\INSTALL` <Enter>

4. When prompted, specify to copy the files to the Windows directory.

   SetRES may now be run by selecting the SetRES icon.

5. Use the SetRES utility to select supported colors and resolutions.

If your are unsure what resolutions and colors your video card can support, refer to the Section of this manual on CLMODE for information on how to determine supported resolutions.

For help on the SetRES utility, select `Help` from the program menu.

Display Drivers

The Cirrus Logic video controller is 100% VGA compatible. The display drivers described in this manual are supplied to improve the resolution for each supported software application package.

It supports improved text resolution, providing greater readability when using the supplied drivers in text-based word processing programs. It also supports higher graphics resolutions, providing greater detail when using the supplied drivers in graphics-based programs.

Each application section describes the application and the revision level of the application supported by the supplied display drivers.

The installation instructions for each display driver follows the introduction section. Follow the instructions carefully to be sure that each display driver is correctly installed. All installation instructions assume that the Cirrus Logic Drivers Diskette is located in drive A:. If drive B: is used, the instructions should be changed appropriately.

Use the installation utility (INSTALL.EXE) to copy display drivers directly to the appropriate application directories where they may be configured by the application software.

Before You Begin

NOTE: *It is assumed that the user is familiar with DOS and certain DOS commands. Please review the installation instructions and the associated DOS commands before attempting the actual installation.*

Not all video modes are available on all systems. If an extended mode driver is installed for a video mode that is not available, the application program will not function properly. There are a number of things that determine the list of available video modes. Some of these include the current monitor type, the amount of installed memory, and the revision of the VGA controller. To determine which modes are available before beginning the driver installation, run the CLMODE program and examine the list of available video modes.

Microsoft Windows

Installing Windows 3.1 Display Drivers

To install the Windows 3.1 drivers from the DOS prompt, do the following:

1. Insure that Windows 3.1 is already installed in your system.

2. From your Windows directory, at the DOS prompt, type:

   `SETUP` <Enter>

   to run the Windows SETUP.EXE program.

3. Follow the instructions on the screen. When you come to the screen which lists the hardware and software components such as display adapter (e.g. VGA, CGA, etc.), keyboard type, mouse type, etc., go to the `Display` selection by using cursor keys to move the highlighted bar and press Enter.

4. From the next menu listing of display options, scroll to the bottom

of the list, and highlight the following text:

```
Other (Requires disk provided by a hardware manufacturer)
```

5. Press Enter, and when prompted, insert the Windows Display Driver diskette into drive A: and type:

   ```
   A:\
   ```
   <Enter>

   The screen displays this list of drivers and their associated resolutions:

   ```
   Cirrus 54xx v1.3, 1280x1024x16
   Cirrus 54xx v1.3, 1024x768x16
   Cirrus 54xx v1.3, 640x480x16
   Cirrus 54xx v1.3, 640x480x256
   Cirrus 54xx v1.3, 640x480x64K
   Cirrus 54xx v1.3, 800x600x16
   Cirrus 54xx v1.3, 800x600x256
   ```

6. Highlight the desired choice by moving the cursor to the correct display driver, and then press Enter.

7. Continue the setup procedure.

To install the Windows 3.1 drivers from within Windows, do the following:

1. Insure that Windows 3.1 is already installed on your computer and start Windows.

2. From the main window of the Program Manager, run the Windows 3.1 Setup program.

3. Select `Change Systems Settings...` from the `Options` menu of Setup.

4. Click on the down arrow at the right side of the `Display:` line. Scroll to the end of the list of available display drivers and select `Other display (Requires disk from OEM)....`

5. Insert the Windows display driver diskette into drive A: and type:

   ```
   A:\
   ```

   as the pathname, then click on OK.

   The screen displays this list of available drivers and their associated resolutions:

   ```
   Cirrus 54xx v1.3, 1280x1024x16
   Cirrus 54xx v1.3, 1024x768x16
   Cirrus 54xx v1.3, 640x480x16
   Cirrus 54xx v1.3, 640x480x256
   Cirrus 54xx v1.3, 640x480x64K
   Cirrus 54xx v1.3, 800x600x16
   Cirrus 54xx v1.3, 800x600x256
   ```

6. Use the cursor to highlight the desired display driver, and then click on OK.

7. Continue the setup procedure. The changes will not take effect until Windows is restarted.

Autodesk - ADI 4.2

The ADI 4.2 driver provided with your Cirrus Logic VGA is the TurboDLD*Classic* display list driver from Panacea. It has only two purposes:

1. To speed-up AutoCAD REDRAWs, PANs, and ZOOMs

2. To provide a more productive, user-friendly, interface to AutoCAD (via the features described later in this manual).

NOTE: *TurboDLD*Classic *supports AutoCAD Release 12, 11/386, AutoShade 2 with RenderMan, or 3D Studio V1.x/2.x. Additional extended memory is recommended for optimal performance.*

Installing TurboDLD*Classic* does not change any of the AutoCAD program files or alter any of the drawing files stored on disk. There are three things the driver does to speed operation:

1. AutoCAD stores drawings in a hierarchical structure, with simple elements intermixed with complex ones. Every time the screen is updated, AutoCAD must decode this structure. TurboDLD*Classic* works differently. While you are working, it translates the normal hierarchical structure into a Display List, a series of vectors or polygon fills. When you pan or zoom, TurboDLD*Classic* uses the Display List, then writes the resulting vectors to the video board hardware. Since the hierarchical structure does not have to be decoded, drawing proceeds very quickly.

2. TurboDLD*Classic* also maintains a Drawing Cache. The Drawing Cache is a compressed list which contains the current contents of a viewport. This pre-scaled portion of the Display List allows for even faster pans and zooms and redraws.

3. TurboDLD*Classic* gives you numerous new user-interface features, such as the bird's eye view. (via the features described later in this manual).

PANs and ZOOMs, aided by only the Display List, run from two to twelve times faster than a non-display list driver. The Drawing Cache further speeds things up to the point that REDRAWs can be up to twenty-five times faster with TurboDLD*Classic*, compared to the graphics drivers shipped with AutoCAD.Features

The features provided by TurboDLD*Classic* include:

- Bird's eye view.
- Accelerated redraws, pans, and zooms.
- Easy to use - no new commands or special menus to learn.
- Protected-mode ADI 4.2 driver - completely compatible with AutoCAD Release 12, Release 11/386, 3D Studio and AutoShade 2 with RenderMan.
- No memory conflicts. Works with AutoCAD's built-in Virtual Memory Manager
- Includes CustomColors™, which lets you interactively customize your logical and physical colors from within AutoCAD.
- Completely compatible with all Autodesk ADI 4.2 compatible third party software.
- Supports all AutoCAD Release 12 features, including rendering to viewports and 31-Bit regen space.

Quick Start Guide

This section summarizes the basics of installing and using TurboDLD*Classic*.

NOTES: *The driver actively uses about 300 Kbytes of RAM from extended memory for its operation. This memory is drawn from AutoCAD's memory pool and therefore does not affect normal DOS operation. The driver is loaded by AutoCAD at AutoCAD load time and is unloaded when AutoCAD is exited.*

*You may wish to purchase and install additional RAM before installing TurboDLD*Classic*, since it shares memory with AutoCAD. If there is significant hard disk activity while you are using TurboDLD*Classic*, it may be an indication that you should add more memory to your system.*

Installation

1. Insert the Cirrus Logic drivers diskette into Drive A: (or B:).

2. Run the Cirrus Logic installation program (INSTALL.EXE), and choose the option for the Autodesk/AutoCAD drivers. Specify the drive and directory where you want them copied to (such as C:\ACAD\DRV).

3. Since the start-up is different for AutoCAD Release 12 than it is for older versions, please follow the instructions for the version of AutoCAD you will be using TurboDLD*Classic* with.

Configuring AutoCAD 12

1. Begin AutoCAD with the reconfigure switch by typing:

   `ACAD -R` <Enter>

2. Choose option 3, `Configure Video Display` from the AutoCAD configuration menu.

3. Type `Y` at the `Do you want to select...` message to display the available video options for AutoCAD.

4. Select `TurboDLD Classic by Panacea Inc.` from the list of display options.

NOTE: *If you chose to install TurboDLD*Classic *into a subdirectory other than ACAD\DRV, be sure to modify the ACADDRV environment variable to include that subdirectory. Otherwise, the TurboDLD*Classic *selection will not appear in the list of available drivers.*

Configuring AutoCAD 11/386

1. Run the FASTACAD.BAT copied into the TurboDLD*Classic* subdirectory by typing:

   ```
   \TURBODLD\FASTACAD      <Enter>
   ```

   The above example shows that TurboDLD*Classic* was installed on drive C: in the TURBODLD sub-directory.

2. Start AutoCAD and reconfigure it to use TurboDLD*Classic* by selecting option 5, `Configure AutoCAD` from the AutoCAD main menu.

3. From the next menu, select option 3, `Configure Video Display`. Choose Item 1, `P386 ADI 4.0/4.1` (R11) as your display device. (For more information, see your AutoCAD Installation and Performance Guide.')

Configuring TurboDLD*Classic*

After selecting the proper display device, the TurboDLD*Classic* driver configuration menu appears.

TurboDLD*Classic* Setup requires configuration of its various operating parameters. These parameters have been logically grouped into menus based on their interaction with AutoCAD. A quick trip through each menu will complete the configuration process. Context sensitive help can be obtained by typing `[?]` at any menu option.

NOTE: *The DLDSETUP.HLP file must be present in order for help to appear. If you get an error message, be sure that the file DLDSETUP.HLP is in the ACAD\DRV sub-directory (R12), or in the TURBODLD sub-directory (R11).*

If at any point during the configuration process you want to change an item on a previous screen, press the ESC key to back up. Select `NO SAVE, EXIT` at the main configuration menu to returns to the AutoCAD configuration menu without making any changes.

1. Choose a graphics board and screen resolution from the `Select Graphics Board/Resolution` menu. If no display options are configured, the driver will be automatically configured for Generic VGA, 640 x 480 resolution at 16 colors.

2. The first menu, `Select Graphics Board/Resolution`, configures TurboDLD*Classic* for the graphics board, the display and rendering resolutions to be used. Prior to configuring TurboDLD*Classic*, run the CLMODE utility and check the first screen to determine the Cirrus Logic chip and amount of memory is on your VGA adapter.

    - `Select Graphics Board` - Selects the graphics chip being used
    - `Select Display Resolution` - Selects AutoCAD, 3D Studio and AutoShade main display screen resolutions

- `Select Rendering Resolution` - Selects AutoCAD 12, 3D Studio and AutoShade rendering resolutions

NOTE: *When configuring TurboDLDClassic's display options, the Rendering Board/Resolution options automatically appear ONLY when configuring AVE Render, 3D Studio or AutoShade. Otherwise, the Display Board/Resolution options will be the only menu choices available.*

Basic Configuration Menu

These options set AutoCAD screen characteristics, number of text lines in the command-line area, font size and dual screen mode.

AUTOCAD TEXT LINES

Selects number of lines in AutoCAD command prompt area. The default is 3 lines, but values from 1 to 10 can be specified. A number larger than 3 might be useful if you are using this driver in a high-resolution mode with small fonts, eliminating the need to frequently swap back and forth between the text and graphics screens.

If you do not want any lines of text at the bottom of the display, use AutoCAD to disable the command area. Press Return to continue with font selection.

FONT SIZE

Selects AutoCAD display screen font or font file to be used. Choose the Font Size you would like to use for your AutoCAD menus, pull-downs, and dialog boxes: 8x8/8x14/8x16/12x20/12x24. For resolutions over 800x600 we recommend the 12x20 or 12x24 fonts. The default is the 8x14 font.

DUAL SCREEN MODE

Enables or disables dual screen operation of AutoCAD.

User Interface Menu

These options include the parameters for maneuvering within AutoCAD. Using these options, the Big Picture, Panacea's bird's-eye view, can be configured to suit your needs or allow for better differentiation within a complex drawing.

DOUBLE CLICK

The Double Click option allows you to set the delay for TurboDLD*Classic*'s Big Picture pop-up. This time represents the largest amount of time that can elapse between the release of the digitizer button and the subsequent press of the same button in order to detect a double click and display the Big Picture. Setting this number too low will result in the computer seeing two separate clicks, while setting the time too high may slow down response time for single button presses. Values between 10 and 30 are recommended.

BP BUTTON

Sets mouse/digitizer button to use for Big Picture. With the BP Button option, TurboDLD*Classic* gives you the flexibility to use a double click on an available digitizer/mouse button as a Big Picture pop-up button. On the BP Button menu line, enter the number of any available digitizer button other than button 1 - button 1 is reserved as the pick button. Within AutoCAD, simply double click the chosen button to invoke the Big Picture.

BP HIGHLIGHT MODE

Controls how the Big Picture (BP) appears on the screen. Patt Line will display the Big Picture using doted lines to form the outer bounding box and the zoom crosshairs. XOR Rect will use a contrasting rectangle to display the Big Picture. The Both option will use a combination of Patt Line and XOR Rect to distinguish the Big Picture.

BP REFRESH

In its fastest mode, TurboDLD*Classic* does not refresh the Big Picture until a DLDREFRESH command is issued. Depending on a drawing's complexity, in this mode, the Big Picture could become confusing, displaying vectors that are now actually erased, and no longer part of the drawing. To configure the Big Picture to be updated as objects are drawn or erased, enable the BP Refresh. If speed is a major concern, disable it.

BP CACHE

Enables or disables TurboDLD*Classic*'s internal memory cache for Big Picture functions. This cache speeds up Big Picture operations on some graphics platforms, primarily on TIGA-based graphics boards. For this reason, the BP Cache is normally disabled. As a reference, on VGAs, the performance benefit of the BP Cache is as little as 1%. With a TIGA-based graphics board, however, the performance benefit of the BP Cache is as high as 400%.

Expert Configuration Menu

These options set the function of TurboDLD*Classic* itself. This menu allows for customization of the driver for speed or to adjust for memory constraints.

DISPLAY LIST

Enables or disables the display list feature of TurboDLD*Classic*. This option should always be set to enable, disabling the Display List will cause TurboDLD*Classic* to run as an ordinary non-display list driver.

DRAWING CACHE

Enables or disables TurboDLD*Classic*'s internal drawing cache, a compressed list of the current viewport, which speeds up pans zooms and redraws. As in the Display List option, `Drawing Cache` should normally be enabled. In low memory situations, it may be desirable to disable the Drawing Cache. Disabling the drawing cache frees memory for AutoCAD but may or may not have a visible effect on your ZOOM

and PAN performance.

AUTOCAD LOGICAL DRAWING SPACE

Using AutoCAD 31-Bit Space, configures TurboDLD*Classic* for use with AutoCAD R12's 31-bit logical drawing space. When set to Yes, the driver uses AutoCAD's extended 31-bit drawing space. Selecting No will use a 15-Bit drawing space, similar to that of AutoCAD R11.

INTERNAL COMMAND ECHO

The echo of TurboDLD*Classic* internal commands can be enabled or disabled with the `Internal Command Echo` option. Enable this option to see the TurboDLD*Classic*'s internal commands display at the AutoCAD command line as they are executed.

BIG PICTURE ZOOM MODE

Sets the Big Picture (BP) zoom definition area display options. In a zoomed view of the static BP, as the current viewport is zoomed or panned. Float mode causes the image in the BP to move around within the bird's-eye window, keeping the zoomed viewport area fixed in the center of the bird's-eye. Freeze mode locks the current BP contents into place to provide a better overall frame of reference.

REGEN MODE

A `Regen Mode` option has been added to TurboDLD*Classic*. A Fast Regen stores the AutoCAD drawing until the Display List has been created, and then displays it, all at once. The Incremental mode displays the drawing in 'chunks' as the display list is created. The Fast mode causes Regens to process approximately 5%-10% faster than the incremental mode. Neither mode changes memory requirements.

3. After all options have been set, use the arrow keys to scroll down to the Save and Exit option and then press Enter to continue.

4. Next, configure the AutoCAD screen display characteristics and then type `Y` to accept the changes.

5. Exit to the AutoCAD drawing editor to begin using TurboDLD*Classic*.

6. The last step in setting-up TurboDLD*Classic* is to configure the colors for AutoCAD. From the AutoCAD Command Line, type `DLDCOLOR`, then press Enter to start CustomColors, TurboDLD*Classic*'s color configuration utility. Make any desired color changes and then Save the new color palette and then Exit to return to the drawing editor.

Verifying Your TurboDLD*Classic* Installation

To verify that TurboDLD*Classic* is running and installed correctly, follow one of these two simple tests.

- If you have the AutoCAD side menu enabled, look for the Panacea Logo in the lower right-hand corner.
- If you are running AutoCAD without a side menu, type: `DLDVER` <Enter> at the AutoCAD command prompt. If TurboDLD*Classic* is loaded and running, this command should return your current version, and serial number.

Reconfiguring TurboDLD*Classic*

To reconfigure TurboDLD*Classic* follow the instructions below for your version of AutoCAD, Release 12 or Release 11.

AutoCAD Release 12

If you need to make changes to your Release 12 TurboDLD*Classic* configuration, do the following:

1. Type `CONFIG`, then press Enter at the AutoCAD command prompt or use `ACAD -R`, then press Enter when starting the program.

2. Select option 3, `Configure Video Display`. Answer `No`, then press Enter to the `Select a new video driver ...` prompt to start the TurboDLD*Classic* configuration program.

3. Make the desired changes to the driver and then Save and Exit to continue to the AutoCAD drawing editor.

AutoCAD Release 11

To change a Release 11 configuration, do the following:

1. Select option 5, `Configure AutoCAD` from the AutoCAD main menu.

2. From the configuration menu, select option 3, `Configure Video Display`. Answer `No` to the `Select a new video driver ...` prompt to start the TurboDLD*Classic* configuration program.

3. Change the desired driver options. Save and Exit to return to the AutoCAD configuration menu.

4. Open or begin a new drawing.

To completely reconfigure TurboDLD*Classic* using Panacea's defaults, delete DLDSETUP.DAT from either the \ACAD\DRV subdirectory (R12) or the TURBODLD subdirectory (R11) and then follow the Driver Configuration instructions earlier in this chapter.

Configuring an AutoCAD 11 Environment

During the TurboDLD*Classic* installation process, a FASTACAD.BAT file is created and placed into the TURBODLD subdirectory. FASTACAD.BAT contains four lines that set four separate environment variables: DLDCFG - used by TurboDLD*Classic* to find all of its configuration files; and DSPADI, RCPADI, RDPADI - used by AutoCAD, 3D Studio and AutoShade 2 w/RenderMan, respectively, to find the driver file. FASTACAD.BAT must be run prior to starting AutoCAD R11 and only needs to be run once per system boot. For automatic loading of the environment variables, FASTACAD.BAT may be added to the AUTOEXEC.BAT file or an AutoCAD start-up batch file.

To add FASTACAD.BAT to your AUTOEXEC.BAT file, insert the line:

```
CALL D:\TURBODLD\FASTACAD
```

anywhere in the file. The above example assumes that FASTACAD.BAT resides in a subdirectory on drive D: called \TURBODLD.

If you don't wish to put FASTACAD in your AUTOEXEC.BAT file, you may put it in a batch file which also starts AutoCAD, or simply remember to run the file before starting AutoCAD.

If you get the message `Out of Environment Space` when you run FASTACAD.BAT, you will need to enlarge your system's environment. This is accomplished by adding the following line,

```
SHELL=C:\COMMAND.COM /P /E:768
```

to your CONFIG.SYS file. The `/E:768` specifies an environment size of 768 bytes. Change this number as appropriate. You will need to reboot after modifying your CONFIG.SYS file, in order for the changes to take effect.

Configuring AutoShade

To configure AutoShade v2.0 to use TurboDLD*Classic*, do the following:

1. Run the FASTACAD.BAT file from your TurboDLD*Classic* sub-directory to set the AutoShade environment variables.

2. Start AutoShade with `SHADE /R` <Enter>, which will allow you to reconfigure AutoShade.

3. For the display device, select `P386 Autodesk Device Interface display driver`, and for the rendering display select the `P386 Autodesk Device Interface rendering driver`. If you are running the display and rendering screen on the same monitor (i.e. single monitor), make sure to tell this to AutoShade. A single monitor approach will require a redraw of the display screen after a

rendering screen.

4. Follow the same installation steps that were used to select the graphics board and display and rendering resolutions for AutoCAD.

Configuring 3D Studio

Configuring 3D Studio requires the following steps:

1. Set the environment variables for 3D Studio by running the PANA3DS.BAT file that was copied into your TurboDLD*Classic* sub-directory.

2. Edit the 3DS.SET file, located in your 3DS directory. The following three lines may be changed to use the RCPADI rendering driver. Locate the lines that begin with:

```
RENDER-DISPLAY
MAIN-DISPLAY
MATERIAL-DISPLAY
```

and change them to read:

```
RENDER-DISPLAY=RCPADI
MAIN-DISPLAY=RCPADI
MATERIAL-DISPLAY=RCPADI
```

Make sure to remove the ';' or any spaces that may be present at the beginning of the line.

It is only necessary for the `RENDER-DISPLAY` line to be set to RCPADI in order to render at high resolution. If you do not need a high resolution main display screen or if you will not be using the materials editor, you may keep `MAIN-DISPLAY` and `MATERIAL-DISPLAY` set to their defaults.

NOTES: *For 3D Studio 1.x, there is no* `RENDER-DISPLAY` *line. The corresponding line is* `DEFAULT-DISPLAY` *and should be changed to read:* `DEFAULT-DISPLAY="RCPADI"`

The quotes around RCPADI must be used for this version of 3D Studio.

The `MATERIAL-DISPLAY` should only be configured for RCPADI when BOTH the Display AND Rendering Resolutions of TurboDLD*Classic* are configured for 256 color resolutions. An unpredictable Materials Editor screen will appear if anything other than 256 colors is selected. If you are unsure about the function of the Materials Editor screen, use the Materials Editor as VGA, you should not have any problems at all. Using the Materials Editor does not give you any more colors to choose from.

3. Save the above changes and start 3D Studio to begin the last part of the configuration procedure.

4. From your 3D Studio directory, delete the file 3DADI.CFG by typing:

```
DEL 3DADI.CFG  <Enter>
```

   This causes 3D Studio to start in its reconfiguration mode.

5. Start 3D Studio by typing:

```
3DS    <Enter>
```

6. During the 3D Studio reconfiguration start-up, you are prompted with a series of questions. After the first 3D Studio question appears and is answered, the TurboDLD*Classic* configuration program appears. Select a graphics board, display and rendering resolutions as you would for AutoCAD use.

   Because RCPADI device drivers, by definition, are combined display and rendering devices, during 3D Studio reconfiguration, you will be brought to the TurboDLD*Classic* configuration menu more than one time, once each for Display and Rendering. It is not necessary to select display and/or rendering resolutions a second time.

7. Simply press Enter to remove the help screen and then highlight `Save and Exit` to continue to the next question. If FASTACAD.BAT is used instead of PANA3DS.BAT to define the AutoCAD operating environment, the TurboDLD*Classic* configuration menu also appears for RDPADI and DSPADI devices if they are present.

NOTE: *TurboDLD*Classic *only provides still rendering support for 3D Studio. TurboDLD*Classic *will not play back rendered .FLI or .FLC files. This is a limitation of 3D Studio. The Mapping Icon colors, which are usually yellow and green, will appear as black when using any external ADI driver. Also, 3D Studio has problems with large fonts. It is recommended that you use the default font settings.*

Configuring AVE Render

AutoCAD 12's AVE Render uses TurboDLD*Classic*'s rendering capabilities to render objects and drawings. If AVE Render has never been configured, when you first select the AutoCAD render command, you will be forced to run through the configuration process. You will be prompted as follows.

1. Select a `Rendering Display Device`.

   Since TurboDLD*Classic* is a combined display/rendering device, choose item 1, `P386 ADI Combined Display/Rendering Driver` from the available choices.

2. Configure the `Rendering Graphics Board and Resolution`.

   Here the TurboDLD*Classic* configuration program appears on the screen. Press Enter to continue past the help screen and display the `Rendering Configuration` menu.

Choose Select Graphics Board/Resolution to display graphics board and resolution menu selections.

First, choose Select Render Graphics Board to select the graphics board to be used for renderings.

Next, choose Select Render Resolution to select the desired rendering resolution from the list of available choices.

Select Return to Previous Menu and then select Save and Exit.

3. Select Render Mode.

   Then select the rendering mode for TurboDLD*Classic*. Select either Render to Viewport or Render to Screen depending on how you wish to view your renderings. To render to a viewport you must be using a display resolution of at least 256 colors. Otherwise, AVE Render will not allow a render to viewport selection.

4. Select a Render Hard Copy Device. If you are using a render hard copy device, select your device type from the list of choices. If you are not using a hard copy device, accept the default of NULL.

   After configuring AVE Render, you will return to the drawing to render the current drawing.

If you have previously configured AVE Render, type Enter at the AutoCAD command prompt to manually display the Render Configuration menu. Follow these steps to re-configure AVE Render.

1. Select option 2, Configure Rendering Device to choose a new rendering driver. Answer Yes to the Select Different Rendering Device question.

2. Select option 1, P386 Combined Display/Rendering Driver.

3. Configure the rendering graphics board and resolution. Here the TurboDLD*Classic* configuration program will appear on the screen. Press the Enter key to continue past the help screen and display the

Rendering Configuration menu.

Choose Select Graphics Board/Resolution to display graphics board and resolution menu selections.

First, choose Select Render Graphics Board to select the graphics board to be used for rendering.

Next, choose Select Render Resolution to select the desired rendering resolution from the list of available choices.

Select Return to Previous Menu and then Save and Exit.

4. Select the rendering mode for TurboDLD*Classic*. Select either Render to Viewport or Render to Screen depending on how you wish to view your renderings. To render to a viewport, use a Display resolution with at least 256 colors. Otherwise, AVE Render will not allow a render to viewport selection.

5. Select Exit to the Drawing Editor from the Render Configuration menu and then type Y to keep the changes you've just made. Press F1 to change to the graphics screen if necessary.

Changing Colors

CustomColors simulates an AutoCAD screen, complete with all possible objects. At the AutoCAD drawing editor command line, type DLDCOLOR, then press Enter to edit the color configuration. Once you enter the utility, you are provided with the following configuration menu at the bottom of the screen:

```
(O)bject,
(D)rawing,
(P)hysical,
(A)DI reset,
(V)GA reset,
(L)oad,
(S)ave,
(E)xit
```

The menu items perform the following functions.

OBJECT

This option allows you to change the color of any AutoCAD screen object, such as the graphics area background color, the menu area text color, or the border line color.

1. Select the object whose color you want to change by moving the highlight box around with the left and right cursor control keys and press Enter when you have highlighted the desired object. Note the one-line description of the object type displayed at the top of the screen as you move the box around.

2. Once you have selected the object, another highlight box will appear around the color boxes nearest to the bottom of the screen. These are the physical colors that the video board supports. Use the left and right cursor keys to select the physical color for the object you have selected and press Enter. The screen quickly redraws with the new color selection for the object you have chosen, and you will be back at the start of object selection in case you want to change the color of another object.

   At any time during color configuration, you can press `Esc` once or twice and return to AutoCAD. Also, pressing the question mark `[?]` key will provide you with context-sensitive help.

DRAWING

This option allows you to modify AutoCAD drawing colors 0, 8 and 9, in a fashion similar to the way you change object colors.

When you select this option, a highlight square appears in the drawing color area of the simulated AutoCAD display. The square can be manipulated using the four cursor keys. Notice that the drawing color portion of the display is laid out just like the CHROMA drawing supplied with AutoCAD. When you press Enter, the highlight moves down to the 16 physical colors, just as it does during the object color selection. Using the arrow keys, pick the physical color you want to

represent the selected drawing color. Press Enter to have your selection take effect.

PHYSICAL

Choosing the Physical option from the menu allows you to alter the red, green, and blue components of the physical colors. A highlight box appears in the row of 16 physical colors at the bottom of the screen.

Use the arrow keys to select the color you wish to edit and press Enter. Three sliders appear near the bottom of the display, with the horizontal position of the slider for each of the color components (red, green, or blue - RGB) indicating the relative intensity of the component. Use the left and right arrow keys to move the slider for the selected component, or type in a number from 0 to 255.

Many graphics boards do not support 255 different intensities for each color component. Therefore, when you enter an intensity, Custom Colors will round it to the nearest intensity which your graphics board supports. For example, VGAs support 64 intensities per RGB color component. This means intensities increase in multiples of 4 (256/64), therefore an intensity of 0 is the same as an intensity of 3.

The up- and down-arrow keys allow you to select which component you want to alter. As you manipulate the sliders, all objects on the display that are of the same color as the selected physical color changes hue. This way you can visually determine the most appropriate setting for your display. Press Enter to set the RGB values you have selected for the physical color you were modifying.

ADIRESET

Constructs a default ADI color palette, as defined in the Autodesk Device Interface Driver Development Kit

VGARESET

Constructs a default VGA color palette in the first 16 color entries. The remaining palette colors remain identical to those used for ADI devices.

LOAD

Reloads the color information from the file DLDCOLOR.DAT. It will be loaded from the directory pointed to by DLDCFG (AutoCAD R11), or from the AutoCAD R12 \DRV directory. If DLDCOLOR.DAT cannot be found, an error message will be displayed.

This command is useful because it allows you to go back to your previously edited color configuration in case you have made some mistake in configuring your colors that you want to undo.

NOTE: *Don't Accidently Wipe Out Your Changes. Selecting* ***ADIreset***, ***VGAreset***, *or* ***Load*** *will irrevocably wipe out any current color changes you may have made, unless you have just saved your new setting, so use them only when you really need to, such as when you have made so many color changes that you can't seem to get back to a reasonable place and just want to start over.*

SAVE

Saves the current color palette to DLDCOLOR.DAT. It will be saved to the directory pointed to by the DLDCFG environment variable in FASTACAD, or to the \ACAD\DRV (R12) directory if FASTACAD is not used.

EXIT

Exits Custom Colors. If you have made palette changes, but not saved them, you will be asked if you want to save your changes before exiting.

NOTE: *When running at more than 8 bits-per-pixel (256 colors), setting physical colors via DLDCOLOR will have no visible effect until a SAVE and EXIT occurs*

TurboDLD*Classic* Commands

TurboDLD*Classic* offers AutoCAD users many features and productivity options. This section alphabetically lists the basic commands found in TurboDLD*Classic* and provides the correct syntax for their usage. For a brief summary of TurboDLD*Classic* commands type DLDHELP at the AutoCAD command prompt.

The Big Picture™ or BP feature allows you to view where in the current drawing you are currently located in your active viewport, and it also gives you the ability to dynamically move to another part of the drawing without having to exit the function you're currently executing.

DLDBIGPIC

To call up the Big Picture, at the AutoCAD command line, type DLDBIGPIC, then press Enter, or double click the right mouse button or button 2 on your digitizer puck. (if you haven't redefined your BP Button double click). This will bring up the BP on the display. You will see cross-hairs and a highlighted section indicating which part of the whole drawing you're currently viewing - the size of the image will be determined by the AutoCAD logical drawing space being used, 15-Bit or 31-Bit. The selection or pick box will have an 'X' through it. Move the mouse/digitizer around to locate your pick box. If you can't see a small box moving, click the left mouse button (the pick button) to size down the pick area. In size mode, the pick box will have a right pointing arrow (→) in it. If the contents of the BP are too small to work with, you may increase the size of the image in the window by pressing the [+] key on your numeric keypad. This performs an incremental zoom within the BP. Likewise, pressing the [-] key reduces the size of the contents of the BP. Press the Home and End keys to put the BP into its smallest and largest size, respectively. The smallest BP size is defined as being exactly the same view as that in the viewport referenced by the BP. The largest BP size is defined as the largest image possible without causing a Regen.

The BP pick box is always proportioned to the proper aspect ratio for the current viewport. Clicking the pick button again will put you back into the pick box move mode ('X'). This operation is very similar to using

the Zoom Dynamic feature of AutoCAD. Once you have positioned the pick box on the area you would like displayed in the active viewport, click any button other than the pick button to initiate the zoom, or press Enter. If you want to abort the operation, just hold any button down, other than the pick button, until the BP disappears. You can also hit any key on the keyboard, other than Enter, to cancel the BP. The BP is updated with new drawing commands, but that moves or erases will not update the image unless BPREFRESH is enabled. A DLDREFRESH or a REGEN will manually update the BP with the current drawing changes.

*DLDBPCACHE**

Enables or disables TurboDLD*Classic*'s internal cache for BP features. This cache speeds up TurboDLD*Classic*'s Big Picture functions. DLDBPCACHE is normally disabled. Performance benefits of the BP Cache with will vary from one graphics platform to the next. For example, on VGAs, the performance benefit of the BP Cache is as little as 1%.

DLDBPDIM

Resizing and repositioning the BP can be accomplished by typing this command at the AutoCAD prompt. DLDBPDIM allows you to tell the driver where you want the BP placed and how large you want it to be. The size is limited to being between one-quarter and one-half the width of the display. This command functions like the pan/zoom selection box in the BP, as far as positioning and dimensioning goes. To abort, hold the right mouse button, or any other digitizer button, down until the moving box disappears.

DLDBPFREEZE

Sets the Big Picture (BP) zoom definition area display options. DLDBPFREEZE toggles the Big Picture Zoom Mode parameter in TurboDLD*Classic*'s Expert Configuration Menu.

In a zoomed view of the static BP, as the current viewport is zoomed or panned, Float mode causes the image in the BP to move around within

the bird's-eye window, keeping the zoomed viewport area fixed in the center of the bird's-eye. Freeze mode will lock the current BP contents into place to provide a better overall frame of reference.

*DLDBPHILIGHT**

Changes the highlight used to display the Big Picture among three modes, Patt Line, XOR Rect, and Both. Patt Lines will use dotted lines to outline the Big Picture pick box. XOR Rect will use a contrasting rectangle to highlight the pick box, and Both will use a combination of Patt Lines and XOR Rect.

*DLDBPREFRSH**

This convenience feature of TurboDLD*Classic*, toggles the Big Picture update mode. If disabled, the BP is updated manually by issuing a DLDREFRESH command. When enabled, DLDBPREFRSH will cause the BP to refresh automatically when an object is drawn or erased. The BP operations therefore will be slower with DLDBPREFRSH enabled.

DLDBPSTATIC

Toggles the BP to stay on the screen at all times. Use this command if you want the BP on the screen in order to conveniently move into it whenever you want to zoom or pan. Typing DLDBPSTATIC will put up the BP at the position you set with DLDBPDIM. The static BP will disappear when other menus pop-up on the screen, and it will also disappear if you draw any objects which may overwrite the BP. With these exceptions, the BP will remain on-screen until you either exit the drawing screen or you type DLDBPSTATIC again.

DLDCOLOR

Invokes CustomColorsTM, Panacea's color configuration program.

DLDCOMPACT

Forces a manual garbage collect of Display List memory thereby returning unused display list memory back to the AutoCAD memory

pool.

*DLDDCACHE**

This command toggles the TurboDLD*Classic* drawing cache on and off. The Drawing Cache is a compressed form of the current viewport which speeds pans, zooms and redraws

*DLDDLIST**

This command toggles the display list function of TurboDLD*Classic* on and off.

NOTE: *If the display list is turned off, AutoCAD runs as though you were using a standard non display list driver - pans, zooms and redraws will be MUCH slower with DLDDLIST disabled.*

*DLDECHO**

Toggles internal TurboDLD*Classic* command echoing at the AutoCAD command line. When TurboDLD*Classic* commands are executed via the digitizer or pop-up menus, they generate internal commands which will be displayed at the AutoCAD command line if DLDECHO is enabled. Disable DLDECHO to simplify the command line.

DLDHELP

Provides a list of TurboDLD*Classic* commands with one-line description of each, within AutoCAD. It's recommended that you flip to the text screen by pressing the F1 key to view the output.

DLDREFRESH

Refreshes the Big Picture to reflect the most current changes to a drawing. If the static BP is up, it will be updated. If not, the next time the BP is brought up, it will contain a current representation of your drawing, provided no changes were made between the DLDREFRESH command and the DLDBIGPIC command. For Automatic update of the Big Picture, see the DLDBPREFRSH command above.

DLDSTAT

Displays the current TurboDLD*Classic* status. A listing of the current TurboDLD*Classic* parameters will be displayed at the AutoCAD command line. A flip to the graphics screen is recommended for this command.

DLDUSAGE

Use DLDUSAGE if you want a to-the-byte breakdown of how memory is being used, specifically for display list processing. DLDUSAGE returns information regarding the memory each viewport is occupying. Since AutoCAD supports multiple viewports, it is possible to have multiple display lists.

DLDVER

Displays the TurboDLD*Classic* version, serial number and registered user's name at the AutoCAD command line.

*DLDVISREGEN**

Toggles between the Fast and Visible Regen modes of TurboDLD*Classic*. A Fast Regen will create the display list and then display the drawing all at once. A Visible Regen will display the drawing in chunks as the display list is created. This command is a dynamic form of the Regen Mode parameter in the Expert Configuration Menu.

NOTE: *The commands above with a '*' following them, when issued within AutoCAD, will override the selections made during TurboDLD*Classic *configuration, for the current drawing session only. Exiting AutoCAD and subsequently restarting will cause all feature settings to revert back to those selected in the TurboDLD*Classic *configuration menu. If you wish to make the current changes permanent, reconfigure TurboDLD*Classic.

Memory Usage and Lists

TurboDLD*Classic* shares extended memory with AutoCAD via the PharLap Virtual Memory Manager. This means that TurboDLD*Classic* will automatically page to disk if it uses up all the RAM that AutoCAD has left for its use. If you start seeing excessive hard disk accesses during PANs, REDRAWs, and ZOOMs while using AutoCAD with TurboDLD*Classic*, try using the DLDCOMPACT command. If this doesn't affect the amount of disk access it's probably time to add more memory to your system.

Tips and Tricks

Upgrading From Older Panacea DLD drivers

Be sure to remove any reference to previous DLD driver commands (FASTACAD calls or SET parameters) or sub-directories that may be in your AUTOEXEC.BAT file or in AutoCAD start-up batch files. Such references could cause AutoCAD and TurboDLD*Classic* to look in the wrong place for setup information.

If you have been using a previous Panacea DLD driver and wish to use the color palette you customized for it with TurboDLD*Classic*, you may copy the DLDCOLOR.DAT file from your older DLD's subdirectory to the sub-directory you specified during the TurboDLD*Classic* installation process.

Maneuvering Through AutoCAD

ZOOMING

When zooming into an image, be aware of your AutoCAD grid snap setting. If you are zoomed extremely far into a drawing and you are having trouble moving your digitizer cursor, you may be snapping to a point which is not part of the zoomed viewport. If the cursor only moves to a single point, or is not on screen at all, turn the grid snap off.

*TURBODLD*CLASSIC *AND PAPER SPACE*

TurboDLD*Classic* features do not work in AutoCAD's Paper Space. The execution of any TurboDLD*Classic* command in Paper Space will

result in an error message at the command prompt.

ZOOM DYNAMIC

Do not use ANY TurboDLD*Classic* features while in the Zoom Dynamic mode of AutoCAD. Because TurboDLD*Classic* cannot determine when Zoom Dynamic has been initiated, unpredictable results will occur. Use the Big Picture feature of TurboDLD*Classic* to accomplish the same task as Zoom Dynamic, in a much more efficient fashion.

SWITCHING COLOR MODES

When switching color modes, (i.e. from 16 to 256 or vice versa) the DLDCOLOR command should be run in order to reconfigure your color palette for the number of colors selected. A black cursor and disappearing crosshairs are both symptoms of a color palette problem.

AUTOCAD R12'S CONFIG COMMAND

Configuring TurboDLD*Classic* in the middle of a drawing session using the CONFIG command is a bit like exiting and re-starting AutoCAD. If are using the static Big Picture, you will have to re-initialize it after returning from the `Configuration` menu.

STICKY CURSORS

Sometimes, when using the Big Picture, the digitizer cursor will appear to stick to the edge of the bird's-eye. This is normal and is the result of the digitizer puck responding to the whole screen area while the Big Picture only occupies a small portion of the screen. Because of the difference in resolutions between the screen and the digitizer, when the screen cursor enters the Big Picture area, the digitizer puck has more drawing area to cover in order to get to the same location as the screen cursor.

USING AUTOCAD COMMANDS

Since TurboDLD*Classic* is totally transparent to users with respect to using normal AutoCAD commands to REDRAW, PAN, and ZOOM, you still have to suffer from some of AutoCAD's nuances. One of these nuances is that ZOOM ALL and ZOOM EXTENTS both force a REGEN, because AutoCAD does not keep track of various boundaries necessary to avoid the REGENs. And REGENs are rather time-consuming and don't use any display list processing to speed themselves up. One way around this problem is to use another of AutoCAD's built-in features, namely the VIEW command.

When you first load your image and see the whole drawing on the screen at once, just type `VIEW Save ALL`, then press Enter, which will save the display position you see under a view named '`All`'. Then, after you've done some detailed editing and want to return back to the big picture, type `VIEW Restore ALL`, then press Enter, instead of `ZOOM All` then press Enter or `ZOOM Extents`, then press Enter, and the full drawing will be restored to the display at display list speeds, without a REGEN.

Another nuance of AutoCAD's is that if you zoom in too far or pan over too far, you may inadvertently cause a REGEN. AutoCAD again provides a very simple solution: the REGENAUTO command. Just type `REGENAUTO Off`, then press Enter at the AutoCAD command prompt, and automatic REGENs will be disabled. The REGENAUTO setting is also saved as part of your drawing file, so you only need to execute it once per drawing. You may even want to set REGENAUTO off in your ACAD.DWG drawing template so that all your drawings are created with REGENAUTO set off.

THIRD-PARTY SOFTWARE

If you are having trouble with TurboDLD*Classic* and third-party AutoCAD applications, be sure that the third-party application supports ADI 4.2. In order to use the ADI 4.2 specification, third-party applications require new T-Drivers and therefore must be revised. If an application does not specifically say that it is ADI 4.2 compatible, it probably is not. Check with the manufacturer to be sure.

If your third-party application is ADI 4.2 compatible and you are having trouble using TurboDLD*Classic*, try running AutoCAD without the third-party application to try to isolate the problem. Also, try the third-party application with the VESA compatible driver shipped with AutoCAD, this will also help to isolate the source of the problem.

Also note that any third-party TSR that needs to access the display may not work properly when using AutoCAD with any advanced ADI display driver, especially if the TSR switches graphics modes. Most TSRs will not support the same graphics platforms as TurboDLD*Classic* and therefore, will not be able to accommodate mode switching back and forth.

Command Summary

This section alphabetically lists the basic commands found in TurboDLD*Classic*. Commands have been listed alphabetically.

- **DLDBIGPIC** calls up the Big Picture - use digitizer clicks to define an area and zoom into it.
- **DLDBPCACHE** enables or disables the Drawing Cache for TurboDLD*Classic* advanced features.
- **DLDBPDIM** allows resizing and repositioning of the Big Picture.
- **DLDBPFREEZE** toggles the Big Picture Zoom Mode between Float and Fixed modes.
- **DLDBPHILIGHT** selects the highlight mode used to display the Big Picture.
- **DLDBPREFRSH** enables and disables the Big Picture automatic update mode.
- **DLDBPSTATIC** toggles the Big Picture to stay on the screen at all times.

- **DLDCOLOR** invokes CustomColorsTM, Panacea's color configuration program.

- **DLDCOMPACT** forces a manual clean-up of Display List memory returning any unused memory back to the AutoCAD memory pool.

- **DLDDCACHE** toggles the TurboDLD*Classic* drawing cache on and off.

- **DLDDLIST** toggles the display list function of TurboDLD*Classic* on and off.

- **DLDECHO** toggles internal TurboDLD*Classic* command echoing at the AutoCAD command line.

- **DLDHELP** provides a list of TurboDLD*Classic* commands with one-line description of each, within AutoCAD. It's recommended that you flip to the text screen to view the output.

- **DLDREFRESH** refreshes the Big Picture to reflect the most current changes to a drawing.

- **DLDSTAT** displays a listing of the current TurboDLD*Classic* parameters. A flip to the graphics screen is recommended for this command.

- **DLDUSAGE** gives a to-the-byte breakdown of how memory is being used for display list processing.

- **DLDVER** displays the TurboDLD*Classic* version, serial number and registered user's name at the AutoCAD command line.

- **DLDVISREGEN** toggles between the Fast and Visible Regen modes of TurboDLD*Classic*.

GEM/3

Installing GEM/3 Display Drivers

To install the GEM drivers, the first step is to build a GEM driver pak. To create a disk known as GEM DRIVER OAK, do the following:

1. Format a blank diskette by inserting it in drive A and typing the following:

   ```
   FORMAT A: /V        <Enter>
   ```

   The DOS format utility will then prompt for the volume label by displaying:

   ```
   Volume Label? (11 characters max) Press Enter for none.
   ```

2. At this prompt, type the following volume-label name in upper case:

   ```
   GEM DRIVRPK         <Enter>
   ```

3. Using the DOS COPY utility, copy the following files from the GEM/3 system master diskette (comes with GEM/3) to the newly formatted GEM DRIVRPK diskette. Type the following sample commands assuming that the GEM/3 system master diskette is in drive A: and the GEM DRIVRPK diskette is in drive B:

   ```
   COPY A:GEMVDI.EXE B:    <Enter>

   COPY A:MDGEM?.SYS B:    <Enter>
   ```

4. Insert the Cirrus Logic drivers diskette into Drive A:.

5. Run the Cirrus Logic installation program (INSTALL.EXE), and choose the option for the GEM/3 drivers and specify the drive and directory where you want them copied to (such as B:\). GEM/3 requires that the drivers be installed from the root directory of a floppy disk in drive A:. Be sure to install the drivers to the root of drive A: or drive B: and then place the diskette in drive A: before proceeding.

6. Install GEM/3 (following the instructions provided in the product's

manual), selecting the standard IBM VGA Color (IBM PS/2) driver.

7. After successfully completing installation, insert the GEM/3 System Master Disk in drive A.

8. Then type `A:\GEMSETUP`, then press Enter.

9. Follow the GEM/3 installation instructions up to the `CHANGE EXISTING CONFIGURATION` stage. When prompted for a screen driver choice, highlight:

   `OTHER (DRIVER PACK)`

10. When prompted to insert a screen driver into drive A, insert the newly created GEM DRIVRPK diskette.

11. Select one of the following:

    `Cirrus Logic VGA 16 Color 800x600`

    `Cirrus Logic VGA 16 Color 1024x768`

12. Continue with the remainder of the installation.

Lotus 123 v2.x, Symphony, and Report Writer

To install a Lotus display driver, do the following:

1. Run the Cirrus Logic installation program (INSTALL.EXE), and choose the option for the Lotus 123 and Symphony drivers and specify the drive and directory where you want them copied to (such as C:\LOTUS).

2. From within the Lotus sub-directory type:

   `INSTALL` <Enter>

3. From the next menu, select `Advanced Options` for Lotus 123 v2.2 or `Change Selected Equipment` for Lotus 123 v2.3.

4. For v2.2, select `Add New Drivers to Library` and go to step 3. For v2.3, select `Modify Current Driver Set` and go to step 6.

5. From the next menu, select `Modify Current Driver Set`.

6. From the next menu, select one of the display and resolution configurations.

7. From the next menu, select `Return To Menu`.

8. From the next menu, select `Save Changes`.

9. Enter the name you have selected for the driver set. We recommend that the driver set name reflect or include the driver's resolution (e.g. 132x43)

NOTE: *The default driver set name assigned by the program is 123.SET.*

You may create multiple driver sets with different display resolutions. To run Lotus 1-2-3 or Symphony with a specific driver set, type:

```
123 SETNAME [Enter] or

SYMPHONY SETNAME [Enter]
```

where SETNAME is the name of the desired driver set.

Lotus 123 v3.X

To install a Lotus 3.0 or 3.1 display driver, proceed as follows:

1. It is assumed that Lotus 1-2-3 v3.0 or 3.1 is already installed on your hard disk, using the standard Lotus installation utility. To install this driver, make the directory containing 1-2-3 v3.0 the current directory. For example, if 1-2-3 is in the directory named 123R3, then type the following command:

   ```
   CD \123R3        <Enter>
   ```

2. One of the files used in the driver installation is named INSTALL.DDF. This is a text file used by the 1-2-3 installation utility, containing information on each of the drivers and modes of operation. If you have been using a driver supplied with another graphics adapter, you may want to make a backup copy of the INSTALL.DDF file currently in your 1-2-3 directory.

   ```
   COPY INSTALL.DDF INSTALL.BAK <Enter>
   ```

3. Run the Cirrus Logic installation program (INSTALL.EXE), and choose the option for the version of Lotus 123 that you are using and specify the drive and directory where you want them copied to (such as C:\123R3). If the INSTALL.DDF has been copied to a backup fille (see step 2 above), answer YES to the prompt to confirm overwriting the file.

4. Now run the Lotus installation utiljty by typing:

   ```
   INSTALL        <Enter>
   ```

5. Select `Change Selected Equipment` from the list.

NOTE: *If you are currently using another driver supplied with a graphics board, it may be necessary to choose First-time installation.*

6. Select `Modify Current DCF`, or Choose another DCF to modify, according to your preference. The following procedure is valid for either selection.

7. Select `Change Video Display`. This will present you with a list of all the display types provided with the 1-2-3 distribution, with two additional choices. GD542x 100 Column Display (800x600 resolution) supports 100x31, 100x42, and 100x75 16 color modes. GD542x 128 Column Display (1024x768 resolution) supports 128x40, 128x54, and 128x96 16 color modes. Select a resolution that best meets your requirements.

8. After making your selection, choose the `Save Changes` option from the menu. When some high-resolution modes are selected, a message may appear asking for the drive letter of the floppy disk. Before entering the drive letter, insert the disk that is requested in the floppy drive. After inserting the disk, you may enter the drive letter containing that diskette.

Ventura Publisher

To install the Ventura Publisher driver, do the following:

1. Install Ventura Publisher V2.0 as instructed in the product's manual, specifying the Hercules driver.

2. Insert the Cirrus Logic drivers diskette into Drive B:. Run the Cirrus Logic installation program (INSTALL.EXE), and choose the option for the Ventura Publisher drivers and specify the drive and directory where you want them copied to (such as A:\). Ventura Publisher requires that the drivers be installed from the root directory of a floppy disk indrive A:. Be sure to install the drivers to the root of drive A: or drive B: and then place the diskette in drive A: before proceeding.

3. Change to drive A: by typing `A:`, then press Enter.

4. After the A: prompt appears, run the VPDRV2_0.EXE program by typing:

   `VPDRV2_0` <Enter>.

   VPDRV2_0.EXE can only be executed from the A: drive.

5. Follow the step-by-step installation procedure as it appears on the screen and select one of the following drivers when prompted:

   ```
   Cirrus Logic VGA 800x600 16 of 256K colors or greys.
   Cirrus Logic VGA 1024x768 16 of 256K colors or greys.
   ```

Ventura Publisher V2.0 is now configured for the selected screen resolution and 16 color graphics.

Microsoft Word

NOTE: *When using a Microsoft Mouse with the driver, please ensure that your mouse driver version level is 7.0 or above.*

To install the Word high resolution text driver supplied with your Cirrus Logic VGA, follow these instructions:

1. If you have not already done so, install Microsoft Word onto your computer system. Follow the instructions supplied with Word. When asked for a screen display type, choose IBM Video Graphics Array (VGA).

2. Run the Cirrus Logic installation program (INSTALL.EXE), and choose the option for the Microsoft Word drivers and specify the drive and directory where you want them copied into (such as C:\WORD5).

NOTE: *To use the new drivers, they must be installed into the same directory as Word.*

3. INSTALL.EXE will copy two screen drivers:

    - SCREEN8.VID for 800x600 graphics resolution
    - SCREEN.VID - for 1024 x768 graphics resolution

    The driver to be used must be named SCREEN.VID. Whan a file is renamed this, it will overwrite the existing display driver. If you wish to preserve the original, it should be renamed or copied prior to installation of the new drivers.

4. The new driver is now installed, and to use it, run Word as you normally would. To view and change the screen resolutions, select **Options**, move the cursor to display mode, and press F1. Choose the desired screen resolution from the list presented.

5. A sub-menu will appear, listing all the choices of resolutions supported by the Cirrus Logic text driver. Select the desired resolution.

WordPerfect 5.1

NOTE: *The high-resolution WordPerfect version 5.1 driver supplied with your Cirrus Logic VGA supports both high resolution text and graphics. WordPerfect allows graphics and text drivers to be set up separately, so be sure to install both drivers.*

To install the WordPerfect high-resolution text driver supplied with your Cirrus Logic VGA, follow these instructions:

1. If you have not already done so, install WordPerfect onto your computer system. Follow the instructions supplied with WordPerfect.

2. Run the Cirrus Logic installation program (INSTALL.EXE), and choose the option for the WordPerfect drivers and specify the drive and directory where you want them copied into (such as C:\WP51).

3. Start WordPerfect, and go into SETUP by pressing Shift-F1 simultaneously.

4. Choose Display [2], then text screen type by pressing [3].

5. Move the cursor to where GD542X appears on the list, and choose SELECT.

6. A sub-menu will appear, listing all the choices of resolutions supported by the Cirrus Logic text driver. Select the desired resolution.

To install the WordPerfect high resolution graphics driver supplied with your Cirrus Logic VGA, follow these instructions:

1. If you have not already done so, install WordPerfect onto your computer system. Follow the instructions supplied with WordPerfect.

2. Run the Cirrus Logic installation program (INSTALL.EXE), and choose the option for the WordPerfect drivers and specify the drive and directory where you want them copied into (such as C:\WP51).

3. Start WordPerfect, and go into SETUP by pressing Shift-F1.

4. Choose Display [2], then graphics screen type by pressing [2].

5. Move the cursor to where Cirrus Logic VGA appears on the list, and choose SELECT.

6. A sub-menu will appear, listing all the choices of resolutions supported by the Cirrus Logic graphics driver. Select the desired resolution.

WordStar

NOTE: *The WordStar display drivers support both WordStar version 5.5 and 6.0 and above and WordStar 2000 version 3.5.*

To install the WordStar high resolution text driver supplied with your Cirrus Logic VGA, follow these instructions:

1. If you have not already done so, install WordStar onto your computer system. Follow the instructions supplied with WordStar.

2. Run the Cirrus Logic installation program (INSTALL.EXE), and choose the option for the WordStar drivers and specify the drive and directory where you want them copied into (such as C:\WS).

3. Using a text editor, enter the file FONTID.CTL in the WordStar directory and change the CRT_TYPE line to read:

```
CRT_TYPE=CL800.WGD
```

4. When WordStar is executed, the display driver will be used for page preview mode.

MP MASTER
MA25700